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10/077,133

02/15/2002

Wilfrid LeBlanc

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03/07/2006

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EXAMINER

WILSON, ROBERT W

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/077,133

Applicant(s)

LEBLANC, WILFRID

Examiner

Robert W. Wilson

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2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 10-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.



PHIRIN SAM  
PRIMARY EXAMINER

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/23/03.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-25 were not supported by the parent applications. The support for claims 1-25 comes from the summary section and sections associated with new figures 1A, 6A, and 7-17 respectively of this applications specification which is new matter when compared to the parent applications. The filing date used for claims 1-25 is the filing date of this CIP.

#### ***Claim Objections***

2. Claims 10-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Claim Objections***

3. Claim 25 is objected to because of the following informalities: The examiner objects to the usage of "enhancement" in the preamble because the applicant means ERL and not enhanced ERL. The examiner recommends deleting "enhancement from the claim. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 23-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

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Referring to claims 23-25, these claims are rejected because they are performing a method via an equations which is a mathematical algorithm which falls under the category of a judicial exception. The mathematical algorithm in each of the claims 23-25 manipulates a mathematical equations having no physical transformation nor do the mathematical equations define a tangible concrete which results in a practical application; consequently, these claims are unpatentable.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 23 is rejected under 35 U.S.C. 102(B) as being anticipated by Meek (U.S. Patent No.; 5,577,097).

Referring to claim 23, Meek teaches system which performs the method of generating an echo return loss which is output of 32 due to a signal which has been received on 10 per Fig

The value L subscript a which the examiner interprets as ERL is input into 32 per Fig 2 (determining an ERL value)

The applicant broadly claims ERL subscript c in the claim language. The value of E subscript n is input into 32 which the examiner interprets as determining ERL subscript c (determining an ERL subscript c value)

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ERL which is an output of 32 based upon the value of L subscript a or ERL and the value of E subscript n which the examiner interpreted as ERL subscript c (denoting ERL estimate as a function of the ERL value and the ERL subscript c value)

8. Claims 24 & 25 are rejected under 35 U.S.C. 102(B) as being anticipated by Brox (U.S. Patent No.: 4,998,241)

Referring to claim 24, Brox teaches: Figure 2 which performs the method of generating an echo return loss enhancement (ERLE) estimate for a communication signal  $x(K)$  per Fig 1.

The reference teaches  $E$  subscript  $x(k)$  divided by  $E$  subscript  $u(k)$  are short time average values of ERLE as shown in Fig 2. Different short term values of ERLE are long term averaged in 207 per Fig 2 over a first period which we will call  $1t$  and this long term averaged value is used as a estimate for ERLE in a calculation. The same steps are repeated wherein different short term average values of ERLE are averaged for a long term in 207 per Fig 2 over a second period which we will call  $'1t$  and again the long term averaged value for ERLE is used in a calculation; thus, denoting ERLE is estimated as a function of  $ERLE_{1t}$  and  $ERLE'_{1t}$ .

Referring to claim 25, Brox teaches: Figure 2 which performs the method of generating an echo return loss enhancement (ERL) estimate for a communication signal  $x(K)$  per Fig 1.

The reference teaches  $E$  subscript  $u(k)$  divided by  $E$  subscript  $e(k)$  is a short time averaged value of ERL as shown in Fig 2. Different short time values of ERL are long term averaged in

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values 208 per Fig 2 over a first period which we will call  $t$  and this long term averaged value is used as a estimate for ERL in a calculation. The same steps are repeated wherein different short term values of ERL are averaged for a long term in 208 per Fig 2 over a second period which we will call  $t'$  and again the long term averaged value for ERL is used in a calculation; thus, denoting ERL is estimated as a function of  $ERL(t)$  and  $ERL(t')$ .

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama (U.S. Patent No.: 4,741,025).

Referring to claim 1, Maruyama teaches: 112, 121, 124, 160, & 133 per Fig 2 are a system for providing gain to be generated by 160 & 130 per Fig 2 or gain control device. The signal path for the system is SIN to 112 per Fig 2 and SOUT which is the input to 130 per Fig 2. This system comprises of an Echo canceller device which is made up of 112, 121, 123, & 124 per Fig 2 with SIN which is 112 per Fig 2 or the signal path into the Echo Canceller device as well as 160 & 130 per Fig 2 which are the Gain Control Device per Fig 2 and SOUT of 112 per Fig 2 is the signal path into the Gain control Device. The connection which carries ERL between 124 & 160 per Fig 2 is the at least one connection between the echo canceller device and the gain control

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device wherein the information pertaining to the signal is provided from the echo canceller device to the gain control device so that a gain can be determined.

Marayama does not expressly call for: gain maximized in light of the information.

Marayama teaches: that that a value of gain is determined which corrects for the ERL is determined per Fig 2.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the value of gain would be maximized in light of the information in order to correct for ERL lost in the Echo Canceller in order to provide the listener with a quality audio signal.

In Addition Maruyama teaches:

Regarding claim 2, the connection which carries ERL between 124 & 160 per Fig 2 is the at least one connection between the echo canceller device and the gain control device which the examiner interprets as statistical information.

Regarding claim 3, the statistical performance information is ERL which is a loss estimate per Fig 2.

Regarding claim 4, the loss estimate is ERL or echo return loss per Fig 2.

Regarding claim 5, the connection between 124 & 160 per Fig 2 is a feedforward connection.

Regarding claim 6, the echo canceller is 112, 121, 123, & 124 per Fig 2 the ingress gain control is 130 & 160 per Fig 2. The ingress echo canceller to ingress gain control is 112 to 130 per Fig 2.

The egress echo canceller to egress gain control is 124 to 160 per Fig 2.

Regarding claim 7, Both the ingress echo canceller to ingress gain control and egress echo canceller to egress gain control are feedforward connections as shown in Fig 2.

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Referring to claim 8, Maruyama teaches: 112,121,123,124, & 160 per Fig 1 perform the method of providing a gain to 130 per Fig 2 which is a gain control device. The output to 112 per Fig 2 is at least one signal path into the gain control device.

130 per Fig 2 receives a signal with 112 per Fig 2 or echo canceller in the signal path.

112, 121,123, & 124 per Fig 2 generate ERL which is echo canceller performance information.

124 per Fig 2 sends the performance information to 160 per Fig 2 which is the gain control device in the signal path wherein the performance information is used to generated a gain limit.

Marayama does not expressly call for: gain limit maximized in light of the information.

Marayama teaches: that that a value of gain is determined which corrects for the ERL is determined by 160 per Fig 2.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the value of gain limit would be maximized in order to correct for ERL lost in the Echo Canceller in order to provide the listener with a quality audio signal.

In Addition Marayama teaches:

Regarding claim 9, the step of generating echo performance information includes generating ERL per Fig 2 or at least an echo return loss component

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075.

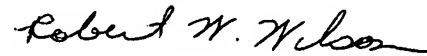
The examiner can normally be reached on M-F (8:00-4:30).



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson  
Examiner  
Art Unit 2661

RWW  
2/28/06



**PHIRIN SAM  
PRIMARY EXAMINER**